

Notice of Allowability

Application No.

10/533,238

Applicant(s)

NAKASHIMA ET AL.

Examiner

Art Unit

Victor V. Yevsikov

2891

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to paper, file 03/12/2007.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>4/29/5; 1/19/7</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1 – 32 are allowed.

The following is an examiner's statement of reasons for allowance:

For claims 1 and 3 - 17, prior art does not teach a method of forming an amorphous silica-based coating film with a low dielectric constant having a high film strength and excellent hydrophobic property, wherein a silicon compound obtained by hydrolyzing tetraalkyl ortho silicate (TAOS) and alkoxysilane (AS) in the presence of tetraalkyl ammonium hydroxide (TAAOH); and heating and curing the substrate at a temperature in a range from 80 to 450 °C.

For claims 2 and 18 - 32, prior art does not teach a method of forming an amorphous silica-based coating film with a low dielectric constant having a high film strength and excellent hydrophobic property, wherein a silicon compound obtained by hydrolyzing or partially hydrolyzing tetraalkyl ortho silicate (TAOS) in the presence of tetraalkyl ammonium hydroxide (TAAOH), purified to remove impurities comprising compounds of alkali metal elements and halogen group elements, mixing the reaction product with the alkoxysilane (AS) or a hydrolysate or a partial hydrolysate thereof, and further hydrolyzing all or a portion of the mixture and tetraalkyl ammonium hydroxide; and heating and curing the substrate at a temperature in a range from 80 to 450 °C.

Art Unit: 2891

Davis (US 7,109,130), Casey (US 7,015,581) and Carati (US 2005/0187096) teach a method of forming an amorphous silica-based coating film with a low dielectric constant.

However, the art of record does not disclose or anticipate the above limitation in combination with other claim elements nor would it be obvious to modify the art of record so as to form a device including the above limitation.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor Yevsikov whose telephone number is (571) 272-1910. The examiner can normally be reached on Monday –Thursdays 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, examiner's supervisor, William B. Baumeister, can be reached on (571) 272-1722. The fax phone numbers for the organization where this application or processing is assigned is (703) 873-9306.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

Art Unit: 2891

application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Yevsikov

Victor Yevsikov
Examiner
Art Unit 2891

April 10, 2007

Asok Kumar Sarkar
4/13/07

ASOK K. SARKAR
PRIMARY EXAMINER